



JUN 29 2001

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Form PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DKT. NO.

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SERIAL NO.

09/776,935

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

APPLICANT

Jacques Dumas et al.

FILING DATE

22 December 1998

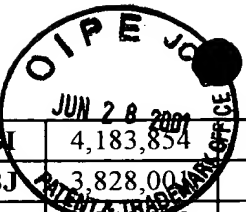
GROUP

U.S. PATENT DOCUMENTS

| Examiner Initial | Document Number | Date | Name | Class | Subclass | Filing Date |
|------------------|-----------------|-----------|----------|------------------|----------|-------------|
| <i>MB</i> | AA | 3,823,161 | 07/09/74 | Lesser | | |
| | AB | 5,130,331 | 07/14/92 | Pascual | | |
| | AC | 4,808,588 | 02/28/89 | King | | |
| | AD | 3,424,760 | 01/28/69 | Helsley et al. | | |
| | AE | 3,424,761 | 01/28/69 | Helsley et al. | | |
| | AF | 3,424,762 | 01/28/69 | Helsley et al. | | |
| | AG | 4,071,524 | 01/31/78 | Banitt | | |
| | AH | 4,111,683 | 09/05/78 | Singer | | |
| | AI | 4,437,878 | 03/20/78 | Acker et al. | | |
| | AJ | 4,643,849 | 02/17/87 | Hirai et al. | | |
| | AK | 5,773,459 | 06/30/98 | Tang et al. | | |
| | AL | 5,508,288 | 04/16/96 | Forbes et al. | | |
| | AM | 4,062,861 | 12/13/77 | Yukinaga et al. | | |
| | AN | 4,111,680 | 09/05/78 | Yukinaga et al. | | |
| | AO | 4,116,671 | 09/26/78 | Yukinaga et al. | | |
| | AP | 4,212,981 | 07/15/80 | Yukinaga et al. | | |
| | AQ | 5,162,360 | 11/10/92 | Creswell et al. | | |
| | AR | 4,514,571 | 04/30/85 | Nakai et al. | | |
| | AS | 3,754,887 | 08/28/73 | Brantley | | |
| | AT | 3,646,059 | 02/29/72 | Brantley | | |
| | AU | 5,696,138 | 12/9/97 | Olesen et al. | | |
| | AV | 5,780,483 | 7/14/98 | Widdowson et al. | | |
| | AW | 4,405,644 | 9/20/83 | Kabbe et al. | | |
| | AX | 4,473,579 | 9/25/84 | Devries et al. | | |
| | AY | 4,526,997 | 7/2/85 | O'Doherty et al. | | |
| | AZ | 4,468,380 | 8/28/84 | O'Doherty et al. | | |
| | BA | 4,623,662 | 11/18/86 | De Vries | | |
| | BB | 4,985,449 | 1/15/91 | Haga et al. | | |
| | BC | 5,312,820 | 5/17/94 | Ashton et al. | | |
| | BD | 4,410,697 | 10/18/83 | Török et al. | | |
| | BE | 4,001,256 | 1/4/97 | Callahan et al. | | |
| | BF | 5,399,566 | 3/21/95 | Katano et al. | | |
| | BG | 5,500,424 | 3/19/96 | Nagamine et al. | | |
| <i>MB</i> | BH | 5,597,719 | 1/28/97 | Freed et al. | | |

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| | | | | | | | |
|----|----|-----------|--------|-------------------|--|--|--|
| MP | BI | 4,183,854 | 1/80 | Crossley | | | |
| | BJ | 3,828,000 | 8/74 | Broad et al. | | | |
| | BK | 4,740,520 | 4/88 | Hallenbach et al. | | | |
| MP | BL | 5,319,099 | 6/7/94 | Kamata et al. | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initial | Document Number | Date | Country | Class | Subclass | Translation | |
|------------------|-----------------|---------------|----------|----------|----------|-------------|----|
| | | | | | | Yes | No |
| MP | BM | EP 335156 | 03/11/89 | European | | | X |
| | BN | EP 459887 | 05/28/91 | European | | | X |
| | BO | EP 371876 | 11/28/89 | European | | | X |
| | BP | 93/24458 | 12/9/93 | WO | | X | |
| | BQ | 2,146,707 | 10/12/95 | Canada | | X | |
| | BR | 96/40673 | 12/19/96 | WO | | X | |
| | BS | 94/14801 | 07/07/94 | WO | | X | |
| | BT | 94/25012 | 11/10/94 | WO | | X | |
| | BU | 1,590,870 | 06/10/81 | England | | X | |
| | BV | 93/18028 | 09/16/93 | WO | | X | |
| | BW | 94/18170 | 08/18/94 | WO | | X | |
| | BX | DE 3305866 A1 | 02/19/83 | Germany | | | X |
| | BY | 95/02591 | 01/26/95 | WO | | X | |
| | BZ | 95/13067 | 05/18/95 | WO | | X | |
| | CA | 95/07922 | 03/23/95 | WO | | X | |
| | CB | 95/31451 | 11/23/95 | WO | | X | |
| | CC | A1 96/40675 | 12/19/96 | WO | | X | |
| | CD | JP 53 086033 | 7/29/78 | Japan | | | |
| | CE | JP 51 063170 | 1/6/76 | Japan | | | |
| | CF | 97/49400 | 12/31/97 | WO | | | |
| | CG | 97/49399 | 12/31/97 | WO | | | |
| | CH | 96/40673 | 12/19/96 | WO | | | |
| | CI | 99/00357 | 1/7/99 | WO | | | |
| | CJ | 97/45400 | 12/4/97 | WO | | | |
| | CK | 96/02112 | 3/8/90 | WO | | | |
| | CL | 99/00370 | 1/7/99 | WO | | | |
| | CM | 97/29743 | 8/21/97 | WO | | | |
| | CN | 98/22432 | 5/28/98 | WO | | | |
| | CO | 96/25157 A1 | 8/22/96 | WO | | | |
| MP | CP | 97/40028 A1 | 10/30/97 | WO | | | |

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Sheet 3 of 8

| | | |
|-----|----|--|
| M/S | CQ | Dumas, J., "CAS Substructure," May 6, 1997, pages 1-29. |
| | CR | Scott, Bill, "Substructure (Patent Families)," August 11, 1997, pages 1-19. |
| M/S | CS | Scott, Bill, "Substructure #2," November 25, 1997, pages 1-3. |
| | CT | "Beilstein number" Collection, 28 pages. |
| | CU | "Beilstein Collection," 4 pages. |
| | CV | Scott, Bill, "Substructure Search," December 2, 1997, pages 1-51. |
| | CX | Substructure Search, pages 1-30. |
| | CY | Derwent World Patents Index Search, pages 20-26. |
| | CZ | Abstract of EP 116,932 |
| | DA | Abstract of EP 676,395 |
| | DB | Abstract of EP 202,538 |
| | DC | Abstract of EP 16,371 |
| M/S | DD | Avruch et al., "Raf meets Ras: completing the framework of a signal transduction pathway", TIBS 19; July 1994; pp. 279-2823. |
| | DE | White, A. D., et al., "Heterocyclic Ureas: Inhibitors of Acyl-CoA:Cholesterol O-Acyltransferase as Hypocholesterolemic Agents," June 6, 1996, pages 4382-95. |
| | DF | Audia, James E., et al., "Potent, Selective Tetraphydro- β -carboline Antagonists of the Serotonin 2B (5HT _{2B}) Contractile Receptor in the Rat Stomach Fundus," January 22, 1996, pages 2773-80. |
| | DG | Forbes, Ian T., "N-(1-Methyl-5-indolyl)-N'-(3-methyl-5-isothiazolyl)urea: A Novel, High-Affinity 5-HT _{2B} Receptor Antagonist," March 17, 1995, pages 855-57. |
| | DH | Boulton, A. J., et al., "Heterocyclic Rearrangements. Part X. ¹ A Generalised Monocyclic Rearrangement," 1967, 2005-07. |
| | DI | N. S. Magnuson, et al., "The Raf-1 serine/threonine protein kinase," Cancer Biology, vol. 5, 1994, pages 247-253. |
| | DJ | G. Daum, et al., "The ins and outs of Raf Kinases," TIBS 19, November 1994, pages 474-80. |
| | DK | W. Kolch, et al., "Raf-1 protein kinase is required for growth of induced NIH/3T3 cells," Letters to Nature, vol. 349, January 31, 1991, page 226-28. |
| | DL | M. Fridman, et al., "The Minimal Fragments of c-Raf-1 and NF1 That Can Suppress v-Ha-Ras-Induced Malignant Phenotype," The Journal of Biological Chemistry, vol. 269, no. 48, December 2, 1994, pages 30105-108. |
| | DM | G. L. Bolton, et al., Chapter 17. Ras Oncogene Directed Approaches in Cancer Chemotherapy, Annual Reports In Medicinal Chemistry, vol. 29, 1994, pages 165-74. |
| | DN | J. L. Bos, "ras Oncogenes in Human Cancer: A Review," Cancer Research, vol. 49, September 1, 1989, pages 4682-89. |
| | DO | Michaelis, Justus, Liebigs Ann. Chem. (JLACBF) 397, 1913, 143. |
| | DP | B. P. Monia, et al., "Antitumor activity of a phosphorothioate antisense oligodeoxynucleotide targeted against C-raf kinase," Nature Medicine, vol. 2, No. 6, June 1996, pages 668-75. |
| | DQ | Lee, et al., Bicyclic Imidazoles as a Novel Class of Cytokine Biosynthesis Inhibitors," N.Y. Academy of Science, 1993, pages 149-70. |
| | DR | F. Lepage, et al., "New N-aryl isoxazolecarboxamides and N-isoxazolybenzamides as anticonvulsant agents," Eur. J. Med. Chem, vol. 27, 1992, pages 581-93. |
| | DS | Ridley, et al., "Actions of IL-1 are Selectively Controlled by p38 Mitogen-Activated Protein Kinase," The American Association of Immunologists, 1997, page 3165-73. |
| M/S | DT | Chemical Abstract, Vol. 116, No. 21, 25 May 1992, pages 741-742. |



U. S. PATENT DOCUMENTS

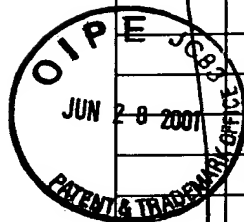
Sheet 4 of 8

| Examiner Initial | Document Number | Date | Name | Class | Subclass | Filing Date |
|------------------|-----------------|----------|---------------------|-------|----------|-------------|
| MZ | DU 5,059,614 | 10/22/91 | Lepage et al. | | | |
| | DV 3,743,498 | 7/3/73 | Brantley | | | |
| | DW 3,547,940 | 12/15/70 | Brantley | | | |
| | DX 5,432,468 | 7/11/95 | Moriyama et al. | | | |
| | DY 1,742,156 | 2/31 | Fitzky | | | |
| | DZ 2,046,375 | 7/36 | Goldstein et al. | | | |
| | EA 2,093,265 | 9/36 | Coffby et al. | | | |
| | EB 2,288,422 | 6/42 | Rohm | | | |
| | EC 2,683,082 | 7/54 | Hill et al. | | | |
| | ED 2,745,874 | 5/56 | Schetty et al. | | | |
| | EF 2,781,330 | 2/57 | Downey | | | |
| | EG 2,867,659 | 1/59 | Model et al. | | | |
| | EH 2,877,268 | 3/59 | Applegate et al. | | | |
| | EI 2,960,488 | 11/60 | Tamblyn et al. | | | |
| | EJ 3,689,550 | 9/72 | Schellenbaum et al. | | | |
| | EK 3,860,645 | 1/95 | Nikawitz | | | |
| | EL 5,423,905 | 6/95 | Fringeli | | | |
| | EM 2,973,386 | 2/61 | Weldon | | | |
| | EN 3,230,141 | 1/66 | Frick et al. | | | |
| | EO 4,863,924 | 9/89 | Haga et al. | | | |
| | EP 4,511,571 | 4/85 | Böger et al. | | | |
| | EQ 4,173,638 | 11/79 | Nishiyama et al. | | | |
| | ER 4,173,637 | 11/79 | Nishiyama et al. | | | |
| | ES 4,820,871 | 4/89 | Kissener et al. | | | |
| | ET 4,983,605 | 1/91 | Kondo et al. | | | |
| | EU 5,098,907 | 3/92 | Kondo et al. | | | |
| | EV 5,036,072 | 7/91 | Nakajama et al. | | | |
| | EW 5,470,882 | 11/95 | Dixon et al. | | | |
| | EX 5,429,918 | 7/95 | Seto et al. | | | |
| | EY 3,151,023 | 9/64 | Martin | | | |
| | EZ 3,200,035 | 8/65 | Martin et al. | | | |
| | FA 5,807,891 | 9/15/98 | Bold et al. | | | |
| MZ | FB 4,009,847 | 3/1/77 | Aldrich et al. | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initial | Document Number | Date | Country | Class | Subclass | Translation | |
|------------------|-----------------|----------|---------------|-------|----------|-------------|----|
| | | | | | | Yes | No |
| MZ | FC 95/33458 | 12/14/95 | WO | | | | |
| | FD 0 771 333 | 3/57 | Great Britain | | | | |
| | FE 0 921 682 | 3/63 | Great Britain | | | | |
| | FF 0 253 997 | 2/88 | East Germany | | | | |
| | FG 0 405 233 | 1/91 | Europe | | | | |
| MZ | FH 1 457 172 | 9/66 | France | | | | |

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|----|----|--------------|-------|---------------|--|--|--|
| NI | FI | 0 487 014 | 12/29 | Germany | | | |
| | FJ | 0 511 468 | 10/30 | Germany | | | |
| | FK | 0 523 437 | 5/31 | Germany | | | |
| | FL | 44 2569 | 2/69 | Japan | | | |
| | FM | 55 981 52 | 7/80 | Japan | | | |
| | FN | 94 22807 | 10/94 | WIPO | | | |
| | FO | 3 532 47 | 3/91 | Japan | | | |
| | FP | 0 828 231 | 10/56 | Great Britain | | | |
| | FQ | 50-149668 | 11/75 | Japan | | | |
| | FR | 55-162772 | 12/80 | Japan | | | |
| | FS | 60-76072 | 6/75 | Japan | | | |
| | FT | 51-80862 | 7/76 | Japan | | | |
| | FU | 50-77375 | 6/75 | Japan | | | |
| | FV | 55-124763 | 9/80 | Japan | | | |
| NI | FW | 0 502 504 A1 | 9/92 | Europe | | | |

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

| | | |
|----|----|--|
| NI | FX | Tarzia, G. et al. "Whythesis and anti-inflammatory properties of some pyrrolo(1H,3H)[3,4]pyrimidin-2-ones and pyrrolo(1H,3H)[3,4-d]pyrimidin-2-ones and pyrrolo(1H,3H)-pyrimidin-2-ones. Chemical Abstracts. 27 August 1979, No. 74558p; page 594. |
| NI | FY | Abstract WO 9922103 , Hedge 28 May 1998 |
| | FZ | |

Examiner

Date Considered

11/07/01

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| Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | | ATTY DOCKET NO. BAYER 12P1 | | SERIAL NO. 09/776,935 | |
| LIST OF REFERENCES CITED BY APPLICANT | | APPLICANT Jacques Dumas et al. | | | |
| FILING DATE 22 December 1998 | | GROUP | | | |

| U.S. PATENT DOCUMENTS | | | | | | | |
|---------------------------------------|----|-----------------|-------------|-------------|-------|-----------|----------------------------|
| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE |
| <div style="font-size: 2em;">MB</div> | AA | 5,429,918 | 4 July 1995 | SETO ET AL. | | | |
| | AB | 5,814,646 | 9/29/1998 | HEINZ | | | |
| | AC | 4,042,372 | 8/16/1977 | HARPER | | | |
| | AD | 3,990,879 | 11/9/1976 | SOPER | | | |
| | AE | 5,185,358 | 2/09/1993 | CRESWELL | | | |
| | AF | | | | | | |
| | AG | | | | | | |
| | AH | | | | | | |
| | AI | | | | | | |
| | AJ | | | | | | |
| | AK | | | | | | |
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| | AN | | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | |
|---------------------------------------|----|-----------------|------------|---------|-----------------------|
| | | DOCUMENT NUMBER | DATE | COUNTRY | TRANSLATION YES NO |
| <div style="font-size: 2em;">MB</div> | AO | 16371 | 3/5/80 | EP | |
| | AP | 676395 | 7/17/1996 | EP | |
| | AQ | 2436179 | 2/6/1975 | DE | |
| | AR | 242666 | 10/28/1987 | EP | |
| | AS | 97/32111 | 7/01/1999 | WO | |
| | AT | 99/32455 | 7/01/1999 | WO | |
| | AU | 99/24398 | 5/20/1999 | WO | |
| | AV | 98/52559 | 11/26/1998 | WO | |

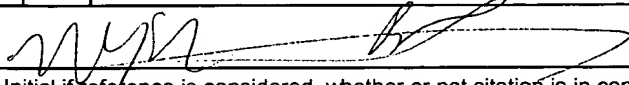
| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.) | |
|---|---|
| <div style="font-size: 1.5em;">MB</div> | AW Kubo, Hiroshi et al: "herbicide activity..." J. Agr. Food Chem, (1970), 18(1), 60-5 |
| <div style="font-size: 1.5em;">MB</div> | AX Russo, F. et al. "Synthesis of 2,6-substituted derivatives of 5H-1,3,4-thiadiazolo[3,2-a]-s triazine-5,7-dione" FARMACO, ED. SCI. (1978), 33(12), 972-83 |
| <div style="font-size: 1.5em;">MB</div> | AY Foussard-Blanpin, Odette: "Comparative pharmacodynamic study of variously substituted carboxamides of the central nervous system" Ann. Pharm. Fr. (1982), 40 (4), 339-50 |
| <div style="font-size: 1.5em;">MB</div> | AZ Grant, A.M et al.: "Hypotensive thiadiazoles" J. Med. Chem. (1972), 15(10), 1082-4 |

| | |
|--|---|
| Examiner MB | Date Considered 11/09/01 |
|--|---|

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| Form PTO 1449 (Modified) | | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | | ATTY DOCKET NO. Bayer 12P1 | | SERIAL NO. 09/776,935 | |
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| FILING DATE 22 December 1998 | | | | GROUP | | | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE |
| MB | AA | 5,698,581 | 12/16/97 | KLEEMANN ET AL. | | | |
| | AB | 4,760,063 | 07/26/88 | HALLENBACH ET AL. | | | |
| | AC | 4,240,820 | 12/23/80 | DICKORE ET AL. | | | |
| | AD | 5,908,865 | 6/1/1999 | DOI ET AL. | | | |
| | AE | 6,080,763 | 6/27/2000 | REGAN ET AL. | | | |
| | AF | | | | | | |
| | AG | | | | | | |
| | AH | | | | | | |
| | AI | | | | | | |
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| | AN | | | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | TRANSLATION YES NO | | |
| MB | AO | DE 35 29 747 A1 | 8/20/85 | Germany | | | |
| | AP | DE 35 40 377 A1 | 11/14/85 | Germany | | | |
| | AQ | 00/17175 | 09/16/99 | WO | | | |
| | AR | 99/23091 | 5/14/1999 | WO | | | |
| | AS | 98/22103 | 5/28/1998 | WO | | | |
| | AT | 00/43384 | 7/27/2000 | WO | | | |
| | AU | 00/55152 | 9/21/2000 | WO | | | |
| MB | AV | 00/55139 | 9/21/2000 | WO | | | |
| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.) | | | | | | | |
| MB | AW | Abstract of EP 676,395 (U.S. equivalent 5,698,581) | | | | | |
| | AX | Abstract of EP 4931 (U.S. equivalent 4,240,820) | | | | | |
| | AY | Abstract of EP 116,932 | | | | | |
| | AZ | Abstract of EP 202,538 | | | | | |
| Examiner <i>MB</i> | | | | | Date Considered <i>11/09/01</i> | | |

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| Form PTO 1449 (Modified) | | JUN 28 2001 | | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | | ATTY DOCKET NO. BAYER-12P1 | | SERIAL NO. 09/776,935 | |
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| LIST OF REFERENCES CITED BY APPLICANT | | | | | | APPLICANT Jacques Dumas et al. | | | |
| | | | | | | FILING DATE 22 December 1998 | | GROUP | |
| U.S. PATENT DOCUMENTS | | | | | | | | | |
| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE | | |
| MB | AA | 6,093,742 | 7/25/00 | SALITURO | | | | | |
| | AB | | | | | | | | |
| | AC | | | | | | | | |
| | AD | | | | | | | | |
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| FOREIGN PATENT DOCUMENTS | | | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | TRANSLATION YES NO | | | | |
| MB | AO | 97/30992 | 8/28/1997 | WO | | | | | |
| | AP | 97/17329 | 8/26/1998 | WO | | | | | |
| | AQ | 860433 | 8/26/1998 | EP | | | | | |
| | AR | 425443 | 10/19/1990 | EP | | | | | |
| MB | AS | 99/32437 | 7/1/1999 | WO | | | | | |
| | AT | | | | | | | | |
| | AU | | | | | | | | |
| | AV | | | | | | | | |
| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.) | | | | | | | | | |
| MB | AW | Murata et al. Chemical and Pharmaceutical Bulletin, vol. 22, 1974 pp. 1212-3 | | | | | | | |
| | AX | Garcia-Lopez et al. Journal of the American Chemical Society, vol 1978, 1978, pp. 438-7 | | | | | | | |
| | AY | English abstract EP425443 | | | | | | | |
| MB | AZ | English Abstract WO9932437 | | | | | | | |
| Examiner  | | | | | | Date Considered 11/09/01 | | | |

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